

STATE OF CALIFORNIA  
DEPARTMENT OF PUBLIC HEALTH

WALTER M. DICKIE, M. D., DIRECTOR

Weekly



Bulletin

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GUY P. JONES  
EDITOR

### Guarding Against Typhoid Fever.

The United States Public Health Service has issued, recently, the following excellent simple exposition of protection against typhoid fever:

Typhoid fever may occur at any time during the year, but it is most prevalent in the United States in the late summer and during the autumn months. Typhoid fever germs are taken into the body through the mouth with the food or drink, or by means of direct infection with flies.

Among foods other than milk that are most likely to be exposed to infection and liable to convey typhoid fever are those eaten raw or uncooked. Well-cooked food or properly pasteurized or boiled milk or milk products are safe from the danger of conveying typhoid or other milk-borne or water-borne diseases. Of course, any article handled by a carrier of these diseases may convey the disease, and cooking is no protection, if one should be so unfortunate as to come in contact with food prepared or served by such a person. A "carrier" of a disease is a person who, although not sick with the disease himself, harbors and discharges the germs of a particular disease from his body. The part played by the fly in the spread of typhoid fever and

other diseases must, of course, be always kept in mind.

The natural question arises as to how these typhoid germs get into water, milk and other foods. The answer is simple. They come from the bowel and kidney discharges of persons who are suffering from the disease, or who are carriers of the germs. Typhoid fever prevalence, therefore, depends upon insanitary methods in respect to the disposal of the body wastes of the human being.

Typhoid germs, or typhoid plants, if you prefer to call them that, may live for some time outside of the body; and in milk which is allowed to stand at moderate or summer temperature they will increase in large numbers within a few hours, because milk is an ideal food for their growth, as it is for the growth of most germs.

It will be understood, of course, that these little plants are so small that several million of them can be spaced very comfortably in a drop of water or milk, or that a typhoid carrier might harbor enough of them under his fingernail to infect half a dozen people. Flies also carry these germs on their feet if they have had the opportunity of getting them on their feet.

It must be remembered that typhoid germs are living, reproducing plants which grow in and derive their nourishment from our bodies. In their multiplication and growth they not



only take their nourishment from our body cells, but they produce poisons, which are called "toxins," that make us sick and often kill. This, of course, is true of many, in fact most, disease germs.

The pasteurization, or the boiling for a few minutes, of milk and the boiling of water when it is of doubtful purity, will remove all danger from typhoid fever and other water-borne diseases. This is an important thing to remember. Not every person who swallows typhoid fever germs has typhoid fever; neither does every person who comes in contact with poison ivy develop an inflammation of the skin. Just why this is true we do not definitely know.

The necessity of inoculation against typhoid fever should be emphasized at this period of the year. It is especially important that the inoculation be done before the vacation period begins. This is particularly necessary today when so many people go on automobile trips through the country, often visiting out-of-the-way places where due precautions in regard to infection are neglected. Many people spend their vacation in rural communities, and this year the number of those planning to travel in foreign countries will probably be large. For all of these, vaccination, or inoculation, against typhoid fever is imperative.

Even those staying in the city should not neglect it, for in those cities where an effort to trace cases is made it is found that many cases may be traced to "carriers." A carrier may escape detection for a long time, causing perhaps only an occasional infection, which has not aroused suspicion, and then, through coming in contact with milk or some other article of food, start a small epidemic. Again, many carriers excrete typhoid bacilli only intermittently, and this makes their detection extremely difficult.

It is an established fact that a person may be rendered comparatively safe from typhoid fever by inoculation. The duration of this immunity is not exactly known, but it is certainly safest to be vaccinated at least once in three years. The slight inconvenience attending the inoculation is a small price to pay for protection against so prolonged and so dangerous an illness as typhoid fever.

The injections of typhoid vaccine are usually given in the arm under the skin at intervals of a week for three doses.

After receiving the typhoid vaccine following a lapse of several hours a local and general reaction of varying intensity may develop. The local reaction consists of a red and tender area several inches in diameter, though in some instances it may be more extensive and marked. The general reaction consists of discomfort, headache, and a rise in temperature.

There is no cause for alarm in regard to the reactions, either local or general, as they are of no importance except for the discomfort. Severe reactions are met with in less than 1 per cent of those injected. An advantageous time for the injection is about 4 p.m., so that if a reaction occurs it will be while the patient is in bed. For those employed in business, successive Saturdays are convenient.

The history of the remarkable control of typhoid fever which has taken place in the United States within the past twenty years is one of the striking examples of the value of public health work. Typhoid fever which only a few years ago took a toll of more than 50,000 lives annually of the population of the United States, is now responsible for the death of something less than 10,000 each year.

Preventive medicine has developed to such an extent that we are sometimes prone to have a false sense of security and to neglect important fundamentals of sanitation. Eternal vigilance is the price of sanitation.



"Health is not only to be well, but to be able to use well every power we have."—  
Florence Nightingale.



### Maternal Mortality Rate Drops Lower.

California, during the past few years, has made an excellent record in saving the lives of young mothers. The state maternal mortality rate, during the past two years, has been considerably lower than the same rate for the United States as a whole, and only two other states have lower maternal mortality rates than California. Unfortunately, however, the maternal mortality for the United States is higher than that for any other civilized country in the world. Italy, The Netherlands, Norway, Finland and Denmark consistently maintain much lower maternal mortality rates than the United States.

The maternal mortality rate is the number of deaths of mothers from causes connected with child birth per



1000 births. The most important single cause of maternal deaths in this country is puerperal septicemia, an infection resulting from lack of surgical cleanliness, and almost 100 per cent preventable through the observance of careful aseptic methods. There is room for great improvement in conditions associated with maternity, and the State Department of Public Health is active in the provision of better facilities for mothers, particularly in those districts of the state where facilities are lacking. Through its inspection of maternity homes and hospitals it is able to raise the standard of such institutions in regard to surgical cleanliness.

The maternal mortality rates for cities are always slightly higher than for the rural districts. This is due to the fact that many of the more difficult or complicated cases are brought from the rural regions into the cities in order to secure the better medical and hospital facilities that are found in the metropolitan areas. California cities, during the past five years, however, have made great strides in lowering the maternal mortality rates. In Santa Ana last year there was not a single maternal death, and Alameda in 1926 and in 1924 had no maternal deaths within its borders. In 1927 the following cities had maternal mortality rates that were lower than the state rate of 5.2 per thousand births: Santa Ana, San Jose, Santa Monica, Pasadena, San Diego, San Francisco, Fresno and Berkeley. Cities maintaining the lowest average maternal mortality rates for the five-year period, 1923-1927 are: Santa Ana, Alameda, Santa Barbara, Riverside, San Jose, Santa Monica, Pasadena, Oakland and San Francisco.

The following table gives the maternal mortality rates for California cities with estimated populations of 20,000 and over, for the five-year period, 1923 to 1927. If the state is able to carry on intensive work in the saving of mothers' lives, it will help materially in reducing the high maternal mortality rate for the United States. The low rate in California during the past few years is significant of the accomplishments that have been made, and with continued support it is safe to assume that California mothers, during future years, will not be subjected to the same hazards at child birth which have been encountered during years in the past.

#### Maternal Mortality Rates, California Cities With Estimated Population of 20,000 and Over.

	1923-1927					5-year average
	1927	1926	1925	1924	1923	
Santa Ana --	0.0	3.6	1.7	7.2	1.0	2.7
San Jose ---	1.1	4.3	8.7	1.1	5.0	4.0
Santa Monica	2.6	1.4	8.2	4.6	6.4	4.6
Pasadena ---	3.8	3.4	4.6	4.3	7.4	4.7
San Diego --	4.3	4.3	6.3	6.5	4.8	5.2
San Francisco	4.4	4.4	6.3	3.9	5.8	4.9
Fresno -----	5.0	4.4	7.9	9.6	7.4	6.9
Berkeley ---	5.1	11.2	6.5	2.1	6.0	6.2
California --	5.2	5.2	5.6	5.2	6.7	5.6
Alameda ---	5.3	0.0	5.6	0.0	1.1	2.4
Richmond ---	5.3	5.2	5.2	2.8	9.2	5.5
Los Angeles (city) ---	5.6	5.7	5.9	6.1	7.0	6.0
Sacramento --	6.4	5.5	10.4	6.6	6.2	7.0
Oakland ---	6.4	2.7	4.3	4.5	2.1	4.0
Glendale ---	6.5	10.0	5.5	6.0	8.6	7.3
Stockton ----	6.7	9.9	11.8	13.7	12.3	10.9
Santa Barbara	6.8	1.8	3.6	2.1	4.1	3.7
Riverside ---	7.5	3.1	1.7	1.7	5.7	4.0
S. Bernardino	9.3	10.1	9.9	8.5	7.8	9.1
Long Beach --	9.9	2.0	2.7	6.7	4.2	5.1
Vallejo -----	13.4	0.0	8.3	8.5	7.7	7.6
Bakersfield --	17.4	10.2	9.6	10.5	10.0	11.6

"Teachers, subjects, school companions, rules, regulations, examinations and disciplines are far more important than most other elements in school hygiene. The school world has its currents and eddies, its deserts and shifting sands, its jungles and arid plains, over and through which children must swim, crawl and struggle to reach some goal that is said to be desirable. The slow and the quick, the dull and the bright, the stupid and the brilliant, the defective and the genius, along with the crippled, the mute, the blind, the deaf, the diseased, the neurotic and the prepsychotic are seeking their levels in schools, in education and in social relationships. Children are born neither free nor equal and the schools make the truth too apparent, but often at great sacrifice of children."—Dr. Ira S. Wile.

#### MORBIDITY \*

##### Diphtheria

46 cases of diphtheria have been reported, as follows: Alameda County 1, Berkeley 1, Oakland 1, San Leandro 2, Los Angeles County 1, Alhambra 1, Los Angeles 12, Montebello 1, Pasadena 1, Whittier 1, Madera 1, Ukiah 1, Orange County 1, Huntington Beach 2, Riverside 1, San Bernardino 3, San Diego 2, San Francisco 4, San Joaquin County 1, Santa Clara County 1, Gilroy 2, Mountain View 2, San Jose 1, Benicia 1, Sonoma County 1.

##### Measles.

11 cases of measles have been reported, as follows: Oakland 1, Del Norte County 1, Kern County 1, Glendale 1, Los Angeles 4, Orange County 1, Sacramento 1, San Francisco 1.

##### Scarlet Fever.

49 cases of scarlet fever have been reported, as follows: Alameda 2, Oakland 3, Angels Camp 4, Contra Costa County 1, Fresno 1, Eureka 1, Kern County 3, Los Angeles County 1, Huntington Park 1, Los Angeles 7, Salinas 4, Orange County 1, Anaheim 1, Corona 2, Sacramento 3, San Diego County 1, San Diego 2, San Francisco 1, San Joaquin County 1, Lodi 1, Santa Barbara County 3, San Jose 3, Sonoma County 1, Tulare County 1.

\* From reports received on August 27th, 28th and 29th for week ending August 25th.



**Smallpox.**

11 cases of smallpox have been reported, as follows: Oakland 2, Contra Costa County 1, Lake County 1, Monterey County 1, Riverside County 1, Watsonville 5.

**Typhoid Fever.**

27 cases of typhoid fever have been reported, as follows: Oakland 1, Calaveras County 3, Fresno County 1, Kern County 6, Lassen County 1, Long Beach 1, Los Angeles 2, Merced County 1, Orange County 1, Sacramento County 3, San Diego County 1, San Francisco 1, Sebastopol 1, Tuolumne County 1, California 3.

**Whooping Cough.**

136 cases of whooping cough have been reported, as follows: Alameda 1, Albany 1, Berkeley 3, Oakland 5, Contra Costa County 5, Fresno County 2, Kern County 4, Los Angeles County 12, Azusa 1, Burbank 1, Huntington Park 2, Los Angeles 41, Pasadena 2, Redondo 1, South Gate 3, Monterey County 1, Orange County 5, Placer County 2, Sacramento 3, San Diego County 3, San Diego 14, San Francisco 4, Stockton 7, Santa Barbara County 5, Santa Barbara 2, Santa Clara County 2, San Jose 1, Tulare County 3.

**Meningitis (Epidemic).**

3 cases of epidemic meningitis have been

reported, as follows: Los Angeles 1, Sacramento County 1, California 1.

**Leprosy.**

2 cases of leprosy have been reported, as follows: Oakland 1, San Diego County 1.

**Poliomyelitis.**

7 cases of poliomyelitis have been reported, as follows: Los Angeles County 1, Los Angeles 3, Daly City 1, Yolo County 1, Davis 1.

**Typhus Fever.**

San Francisco reported one case of typhus fever.

**Food Poisoning.**

Santa Ana reported two cases of food poisoning.

**Malta Fever.**

Santa Barbara reported one case of malta fever.

**Actinomycosis.**

Santa Barbara County reported one case of actinomycosis.

**Encephalitis (Epidemic).**

Glenn County reported one case of epidemic encephalitic.

## COMMUNICABLE DISEASE REPORTS

Disease	1928				1927			
	Week ending			Reports for week ending Aug. 25 received by Aug. 29	Week ending			Reports for week ending Aug. 27 received by Aug. 30
	Aug. 4	Aug. 11	Aug. 18		Aug. 6	Aug. 13	Aug. 20	
Actinomycosis	0	0	0	1	0	0	0	0
Anthrax	0	0	0	0	0	0	0	0
Botulism	0	0	0	0	0	0	0	0
Chickenpox	48	34	40	46	62	30	35	35
Diphtheria	55	64	65	46	74	71	57	67
Dysentery (Bacillary)	1	1	4	0	0	0	7	0
Encephalitis (Epidemic)	0	1	0	1	1	2	0	5
Food Poisoning	2	5	1	2	0	0	0	0
German Measles	16	17	13	11	8	5	10	11
Gonococcus Infection	93	114	163	119	150	90	136	83
Influenza	10	4	16	7	2	6	3	5
Jaundice (Epidemic)	0	0	0	0	0	0	0	0
Leprosy	0	1	2	2	0	0	0	0
Malaria	3	1	0	3	0	4	1	3
Malta Fever	0	0	1	1	0	0	0	1
Measles	20	11	4	11	60	51	58	38
Meningitis (Epidemic)	4	2	4	3	5	2	3	3
Mumps	68	61	51	31	39	22	29	25
Paratyphoid Fever	1	1	1	0	1	3	0	0
Pneumonia (Lobar)	27	29	22	22	30	20	59	37
Poliomyelitis	8	5	6	7	60	71	51	48
Rabies (Animal)	7	19	12	15	1	3	3	3
Rocky Mt. Spotted Fever	0	0	0	0	0	1	0	0
Scarlet Fever	62	40	38	49	68	41	50	43
Smallpox	10	13	6	11	7	6	6	3
Syphilis	146	185	123	152	178	106	130	82
Tetanus	3	3	1	2	0	1	2	4
Trachoma	1	1	1	1	0	0	2	1
Trichinosis	0	0	0	0	0	0	0	0
Tuberculosis	209	155	176	210	201	183	265	160
Typhoid Fever	18	27	23	27	16	22	26	15
Typhus Fever	0	0	0	1	0	0	0	0
Whooping Cough	175	146	188	136	134	161	160	118
Totals	987	940	961	917	1,097	901	1,093	790

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